REMARKS

1. Preliminary Remarks

a. Status of the Claims

Claims 33-35 are pending in this application. Claims 33-35 are amended. Applicant respectfully requests entry of the amendments and remarks made herein into the file history of this application. Upon entry of the amendments, claims 33-35 will be pending and under active consideration.

b. Amendment to the Claims

Claim 33 is amended to additionally relate to a physiologically tolerated acid addition salt or N-oxide of the compound. Claim 34 is amended to recite a pharmaceutical composition, which comprises the compound of claim 1 and a physiologically acceptable carrier and/or an auxiliary substance. Amended claim 35 is directed to a method for treating Parkinson's disease and schizophrenia to a subject in need thereof, said method comprising administering an effective amount of the compound of claim 33 to a subject in need thereof. Support for amended claims 33-35 can be found throughout the application as originally filed, for example, pages 2 and 3 of the specification, and claims 1, 23 and 27. In view of the amended claims finding support in the application as originally filed, Applicant submits that no new matter is added.

c. Claim Objections

On page 2 of the Office Action, the Examiner objects to claim 34 as being of improper dependent form for failing to further limit the subject matter of the previous claim. Specifically,. the Examiner asserts that claim 34 relates to a salts and N-oxides of the compound of claim 33, while claim 33 is limited to the free base form. Amended claim 33 relates not only to the compound, but also salts and N-oxides thereof. Applicant submits that the compound of claim 33, chemically spoken, can indeed exist in the form of an acid addition salt (where the proton is bound to the nitrogen atom of the piperazine ring or the pyridine ring), or in the form of its N-oxide (where the nitrogen atom of the pyridine ring is oxidized). Since amended claim 33 relates to a compound, its salt, or N-oxide, and claim 34 relates to a pharmaceutical composition comprising the compound of claim 33, salt thereof, or N-oxide, Applicant submits that claim 34 properly depends from claim 33 by further limiting the subject matter of claim 33. In view of the foregoing amendment, Applicant respectfully requests withdrawal of the objection.

On page 2 of the Office Action, the Examiner objects to claim 35 for depending on a canceled claim. Applicant has amended claim 35 to depend from claim 33, and therefore respectfully requests withdrawal of the objection.

d. Nonstatutory Obviousness-type Double Patenting

On page 3 of the Office Action, the Examiner rejects claims 33-35 on the ground of nonstatutory obviousness-type double patenting over claims 1-19 and 22 of U.S. Patent No. 7,320,979. As stated previously, Applicant either intends to address the material differences between the claimed invention and U.S. Patent No. 7,320,979 or file a terminal disclaimer upon indication of allowable subject matter.

2. Patentability Remarks

a. 35 U.S.C. §112, Second Paragraph

On page 2 of the Office Action, the Examiner rejects claims 34 and 35 under 35 U.S.C. §112, second paragraph, as being indefiniteness. Specifically, the Examiner asserts that claim 34 is indefinite for reciting "at least one compound as claimed in claim 33" when only one compound is claimed. The Examiner alleges claim 35 is indefinite for depending upon a canceled claim.

Claim 34 is amended now in part to be directed to the compound of claim 33. Claim 35 is amended to be dependent upon claim 33. In view of the foregoing amendments, Applicant submits that the rejection of claims 34 and 35 under 35 U.S.C. §112, second paragraph, has been overcome and should be withdrawn.

b. 35 U.S.C. §112, First Paragraph

On page 2 of the Office Action, the Examiner rejects claim 35 under 35 U.S.C. §112, first paragraph, as lacking enablement. Specifically, the Examiner asserts that claim 35 recites two uses as an antagonist or an agonist that cannot be useful for both schizophrenia and Parkinson's disease.

Claim 35 is now directed to a method of treating a cognitive disturbance, depression, anxiety, addiction, an eating disorder, a kidney function disturbance, Parkinson's disease, and schizophrenia comprising administering an effective amount of the compound of claim 33 to a subject in need thereof. Researchers have recognized the use of D_3 receptor antagonists to treat Parkinson's Disease (PD). Specifically, the literature states that "elevations of the D_3 receptor occur in schizophrenia and in experimental conditions of hyperdopaminergic tone… which also may occur with L-dopa-induced dyskinesias in **PD**. Thus, D_3 receptor antagonists could prove to be effective in the treatment of **schizophrenia**, psychostimulant **drug abuse**, and drug-induced dyskineseas…" J.N. Joyce. Pharmacology and Therapeutics, 2001;90:231-59 ("Joyce" hereafter) at pages 251-2

(emphasis added). Joyce also discloses that, "[an] effective antiparkinsonian D_3-preferring agonist… [exhibits] **antidepressive effects**," and that, "experimental models of PD suggest that D_3-preferring agonists do act through D_3 receptors to provide relief of akinesia." Joyce at pages 251-2 (emphasis added). Accordingly, researchers recognized that dopamine D_3 receptor-targeting drugs could be used to treat disorders including PD, schizophrenia, depression, and others.

Further, improvements in learning performance have been observed with treatment using various D_3 receptor antagonists in a rat model of scopolamine-induced amnesia, which models **cognitive disturbances**. *See* J.Laszy *et al.* Pscyhopharmacology, 2005;179:567-75. Additionally, **drug addiction** has been shown to be attenuated in a rat model by D_3 receptor blockade via D_3 receptor antagonists. *See* C.A. Heidbredder *et al.* Brain Research Reviews, 2005;49:77-105. **Antianxiety effects** in a rat model have also been demonstrated for dopamine D_3 receptor-targeting drugs. *See* Z. Rogóż *et al.*, Polish Journal of Pharmacology, 2003;55:449-54. Additionally, D_3 receptors have been implicated in regulating **renal function**. *See* Mühlbauer *et al.*, Acta Physiologica Scandinavica, 2000;168(1):219-23. Moreover, given that dopamine D_3 receptor$^{-/-}$ mice exhibit increased levels of body fat compared to wild-type when fed a high fat diet, the role of the dopamine system in mediating changes of food intake elicited by metabolic and adiposity signals has been explored. *See* Benoit *et al.*, Behavioral Neuroscience, 2003;117(1):46-54 ("Benoit). Benoit shows that D_3 receptor$^{-/-}$ mice were hyperresponsive to amylin and leptin compared to wild-type, and that the D_3 receptor chronically inhibits the effects of adiposity hormones, contributes to a net anabolic state, and plays a central role in **eating disturbances**. All of these references indicate that rather than being groundless, the evidentiary connection between the instantly claimed compounds and their potential use for treating PD, schizophrenia, cognitive disturbances, depression, anxiety, addiction, eating disturbances, and kidney function disturbances was sufficiently studied and would be convincing to one of ordinary skill in the art regarding how the claimed compound might be used to treat the conditions claimed in amended claim 20. Applicant respectfully submits this evidence merely needs to be convincing rather than conclusive to one of skill in the art. See MPEP § 2164.05 *and In re Brandstadter*, 482 F.2d. 1935 (CCPA 1973). Applicant further submits that based on the prior art, one of ordinary skill in the art could have anticipated the effects of D_3 receptor modulators on the medical conditions of amended claim 35.

Furthermore, the instant application discloses that the instantly claimed compounds modulate D_3 receptor activity, and have very good affinities for the D_3 receptor. Instant Application at page 71, Table 1, line 1 and Example 1. In view of the teachings of the instant written

description, and the art described above, Applicant submits that the instant written description is enabled because one of ordinary skill in the art could readily have anticipated the effects of a change within the claimed subject matter. *See* MPEP § 2164.03. Although some experimentation might have been necessary to establish the extent of the usefulness of the instantly claimed compound, the instantly claimed subject matter was enabled because one of ordinary skill in the art had sufficient direction and guidance from the instant written description as to how to use the compound to treat the conditions of amended claim 35. Determining whether the extent to which the instantly claimed compound treats these conditions was routine, as demonstrated by the references described above. *See* MPEP § 2164.05. In view of the foregoing amendments and remarks, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 35 under 35 U.S.C. § 112, first paragraph.

3. Conclusion

Applicant respectfully submits that the instant application is in good and proper order for allowance and early notification to this effect is solicited. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the instant application, the Examiner is encouraged to call the undersigned at the number listed below.

Respectfully submitted,

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